E.S.V.I. vétolabo

PARTENAIRE DE VOS RECHERCHES



SM500 Stereo Microscope

User Manual

I. Product Overview

This microscope features an open-base design, with the inner side of the base (the space in front of the lens) directly accommodating a brain stereotaxic instrument, making it highly suitable for stereotaxic experiments. It boasts significant advantages such as simple operation, compact and flexible design, lightweight construction, and rapid focusing.

- **Product Features:**

✓ The microscope slides smoothly left and right and can be locked in any position, enabling quick focusing and switching for animal brain studies.

✓ The microscope and frame can rotate 360°, allowing flexible positioning and unrestricted observation of the target.

✓ High-definition wide-angle eyepieces provide a large field of view, high clarity, no dizziness, and reduced eye strain.;

✓ 7-45x continuous zoom offers a larger magnification range to meet higher magnification demands.

✓ Adjustable eyepiece spacing accommodates different interpupillary distances for enhanced comfort.

✓ The objective lens features high-definition coated magnifying lenses, made of full copper material, with anti-mold and anti-moisture properties, delivering clear images without glare and extended lifespan.

✓ The frame supports both binocular and trinocular lenses. The trinocular version includes a new 0.5X standard sync interface for connecting CCD or electronic eyepiece cameras to display and capture images on a monitor.

✓ Equipped with a high-brightness LED ring light featuring continuously adjustable intensity and soft white illumination that is non-dazzling.

✓ Includes a 0.5x auxiliary lens, extending the working distance to 165mm.

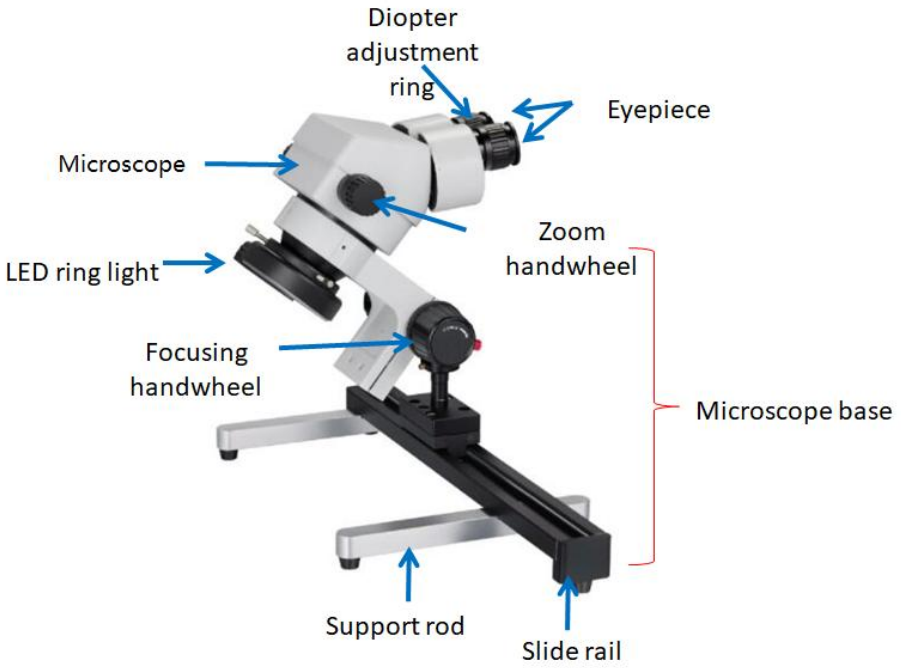
✓ Simple operation, compact and lightweight design, easy to carry with one hand.

Technical Specifications:

1. **Lens:** 45° tilt, 360° rotation, adjustable interpupillary distance (48-76mm), bilateral diopter adjustment (±5D), fine-tuning range of 0-50mm.
2. **Eyepiece:** High-eye-point wide-field, standard WF10x/22mm; optional eyepieces and auxiliary objectives can expand the maximum field of view to 70mm.

3. **Magnification:** Continuous zoom objective (0.7-4.5x), zoom ratio 6:4:1, corresponding magnification 7-45x; optional eyepieces and auxiliary objectives can extend this to 2.1-270x.
4. **Working Distance:** 100mm or 165mm (with 0.5x auxiliary lens).
5. **LED Ring Light:** 144 LEDs, φ62 standard interface, working distance 50-250mm, brightness >50,000 Lux, adjustable.
6. **Open Base:** Supports left or right installation, adaptable to left- or right-arm stereotaxic instruments.

II. Components Overview



Installing the CCD Camera and Monitor (Optional)

Special Note: This step applies only to trinocular microscopes, which have a CCD Camera Interface on the microscope body, as shown below;



Additional accessories included: Cross-head mini screwdriver, eyepiece eyecups.

Trinocular microscopes with a CCD camera interface can be equipped with a camera and/or monitor, allowing real-time viewing, image capture, and video recording, as shown below.



III. Precautions

Operation:

(1) Avoid direct sunlight exposure; store in a dry, clean environment, away from high temperatures and strong vibrations.

(2) Handle with care during transport to prevent impacts or collisions.

(3) Avoid touching lens surfaces to prevent smudges or fingerprints from affecting image clarity.

(4) Do not rotate the zoom handwheels in opposite directions to avoid malfunction.

(5) Handle lenses carefully during installation/removal to prevent dropping.

Maintenance:

(1) Keep all lenses clean. Use a blower or soft cloth to remove dust; for oil or fingerprints, wipe gently with a cloth dampened with a 3:7 ethanol-ether mixture.

(2) Do not use organic solvents on other microscope surfaces, especially plastic parts. Use neutral detergents instead.

(3) Avoid disassembling the microscope yourself to prevent performance issues.

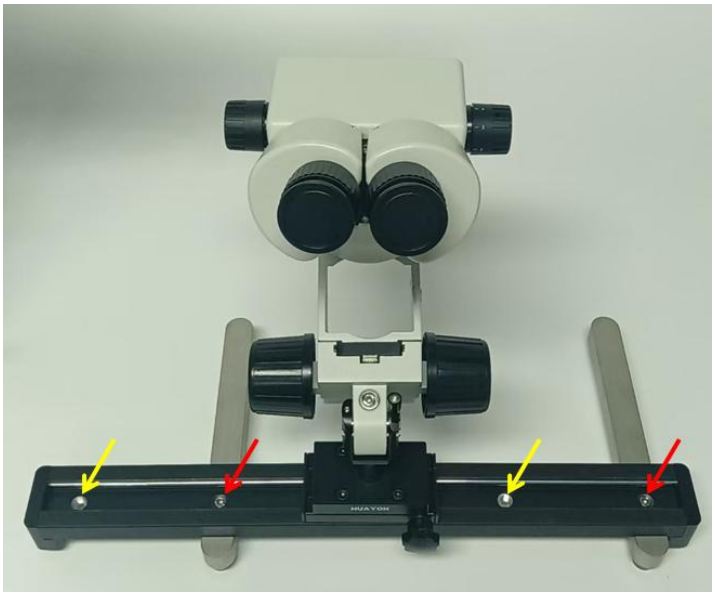
(4) Cover the microscope with a dust-proof cover when not in use, and store in a dry place to prevent rust or mold.

(5) Regular inspections are recommended to maintain performance (contact local dealers for details).

IV. Instrument Setup

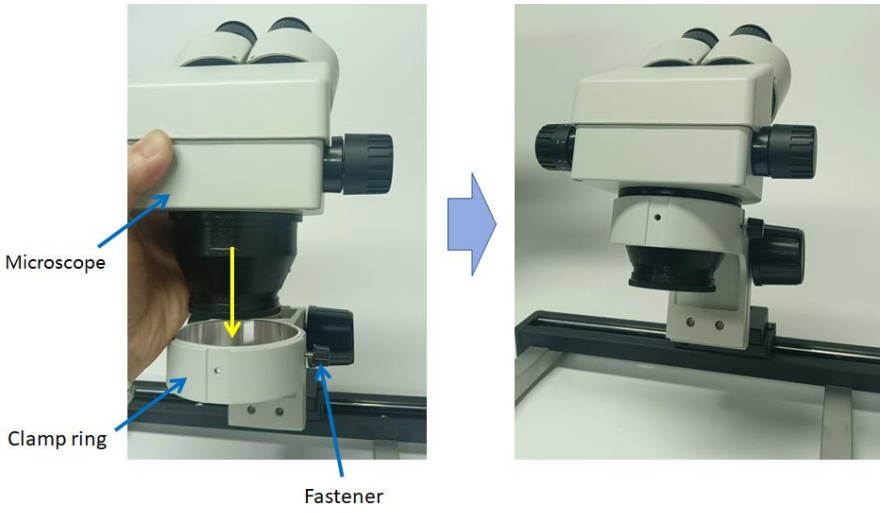
1. Base Installation:

As shown below, the support rod can be installed at either the red or yellow arrow positions.



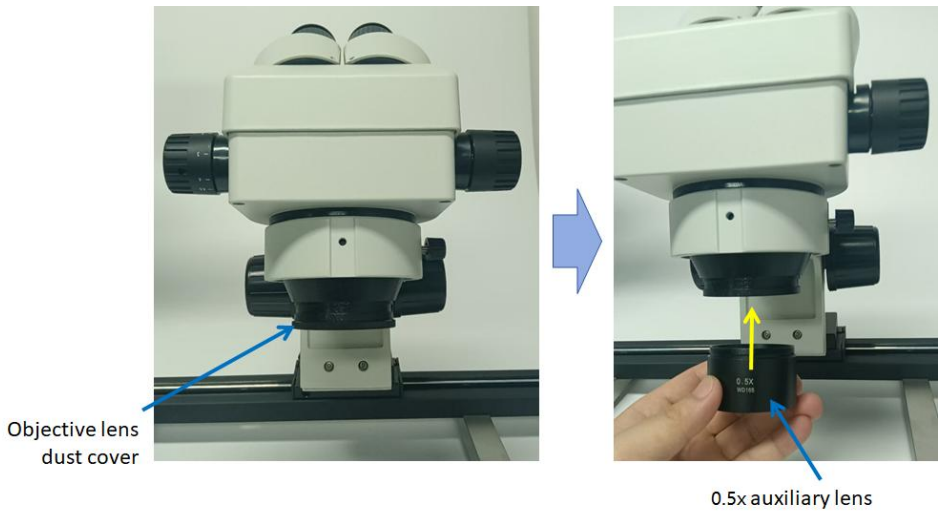
2. Lens Installation:

Loosen the clamp ring's side fastener, insert the microscope downward, and retighten the fastener to secure.



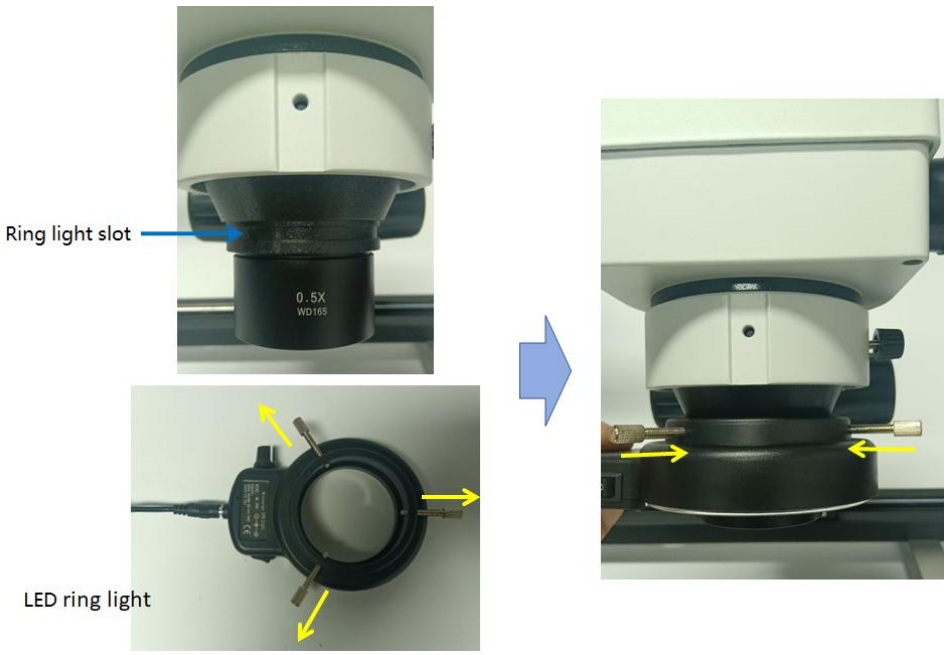
3. Auxiliary Lens Installation:

Remove the objective lens dust cover and screw in the 0.5x auxiliary lens (fine-threaded).



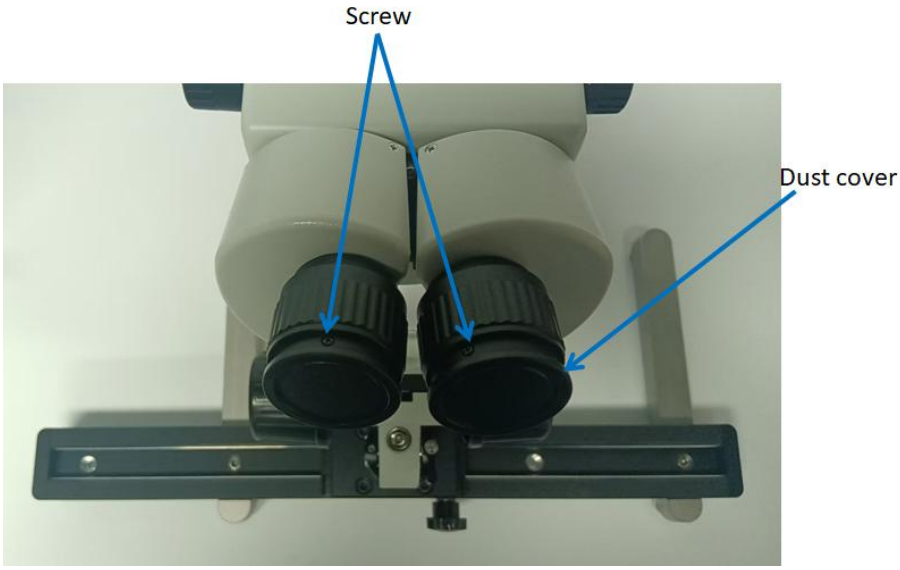
4. LED Ring Light Installation:

Loosen the three side screws, attach the ring light to the slot, and retighten the screws evenly.



5. Eyepiece Installation:

Remove the side screw and dust cover with a mini screwdriver, insert the eyepiece, and retighten the screw.



6. Using combine with Stereotaxic Instrument:

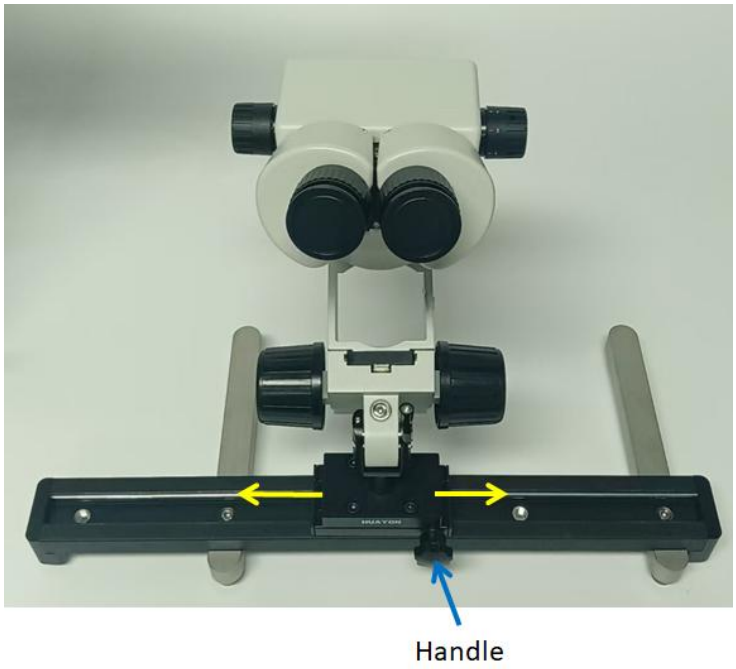
Simply fit the microscope's left and right support rods onto both sides of the stereotaxic instrument's base.



V. Usage Instructions

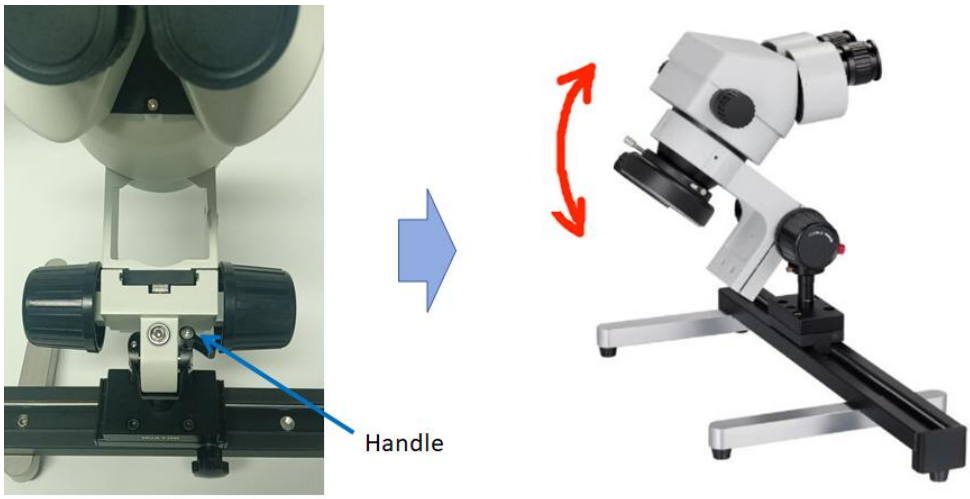
1. Horizontal Microscope Adjustment:

Loosen the handle to slide the microscope horizontally; tighten to lock.

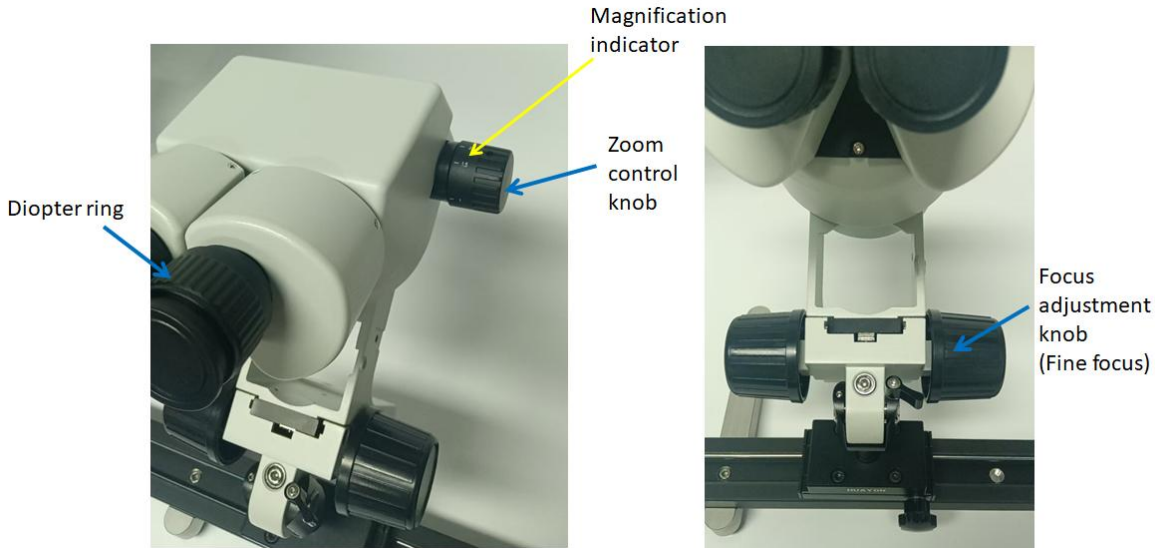


2. Microscope Tilt Adjustment:

Loosen the handle to adjust the tilt angle; tighten to secure.

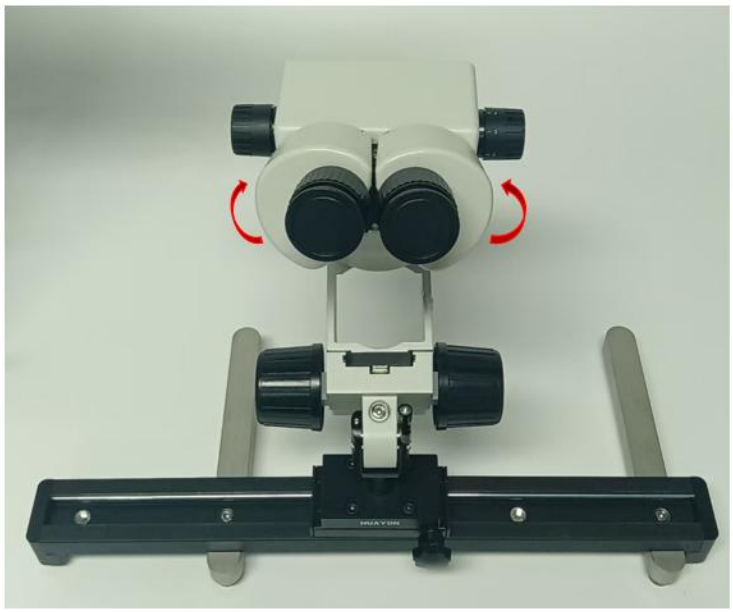


3. Diopter Adjustment & Focusing:
   - Step 1: Zoom to maximum magnification.
   - Step 2: Set the right diopter ring to "0."
   - Step 3: Focus the right eyepiece using the focus wheel.
   - Step 4: Zoom to minimum magnification.
   - Step 5: Adjust the right diopter ring for clarity.
   - Step 6: Repeat Steps 3-5 for precision.
   - Step 7: Adjust the left eyepiece diopter if needed.



4. Interpupillary Distance Adjustment:

Rotate the prism housings as shown until comfortable.



5. Eyecup Usage:
   - For non-glasses wearers: Rotate the eyecup for a snug fit.
   - For glasses wearers: Remove the eyecup before use.

VI. Packing List

No.	Item	Qty	Remarks
1	Microscope base (rail)	1	
2	Lens (with dust cover)	1	
3	10X eyepiece (with cup)	2	
4	0.5x auxiliary lens	1	
5	LED ring light	1	
6	Tool kit	1	
7	Power cord	1	
8	User manual	1	
9	Warranty card	1	

VII. After-Sales Service

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ZA de Courtaboeuf
F91940 Les Ulis
Site WEB : www.esvi-vetolabo.com
info@esvi-vetolabo.com

SM500 Stereotaxic Microscope

This microscope features an open-base design, making it ideal for stereotaxic brain experiments. It offers simple operation, compact size, lightweight design, and fast focusing.



Key Features:

✓ Smooth Sliding & Locking Lens – The mciroscope glides effortlessly left/right and locks in place for quick brain focusing and rapid switching.

✓ 360° Rotatable Lens & Stand – Flexible positioning for unrestricted observation of the target area.

✓ HD Wide-Angle Eyepiece – Large field of view, high clarity, anti-glare, and reduced eye strain.

✓ Bright Adjustable LED Ring Light – Soft white light, non-dazzling, with continuous brightness control.

✓ Lightweight & Portable – Easy one-handed carrying for lab flexibility.

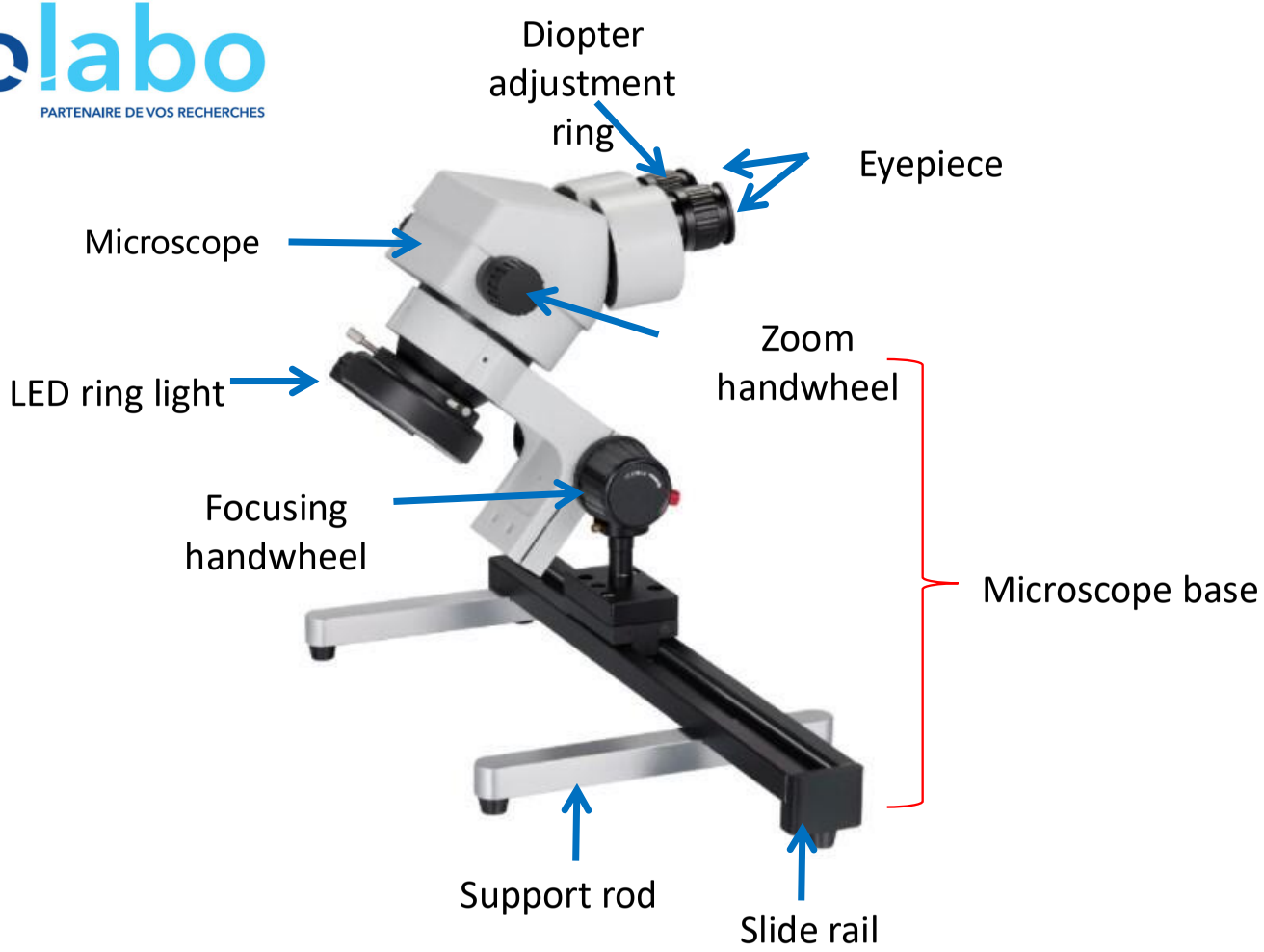
Technical Specifications:

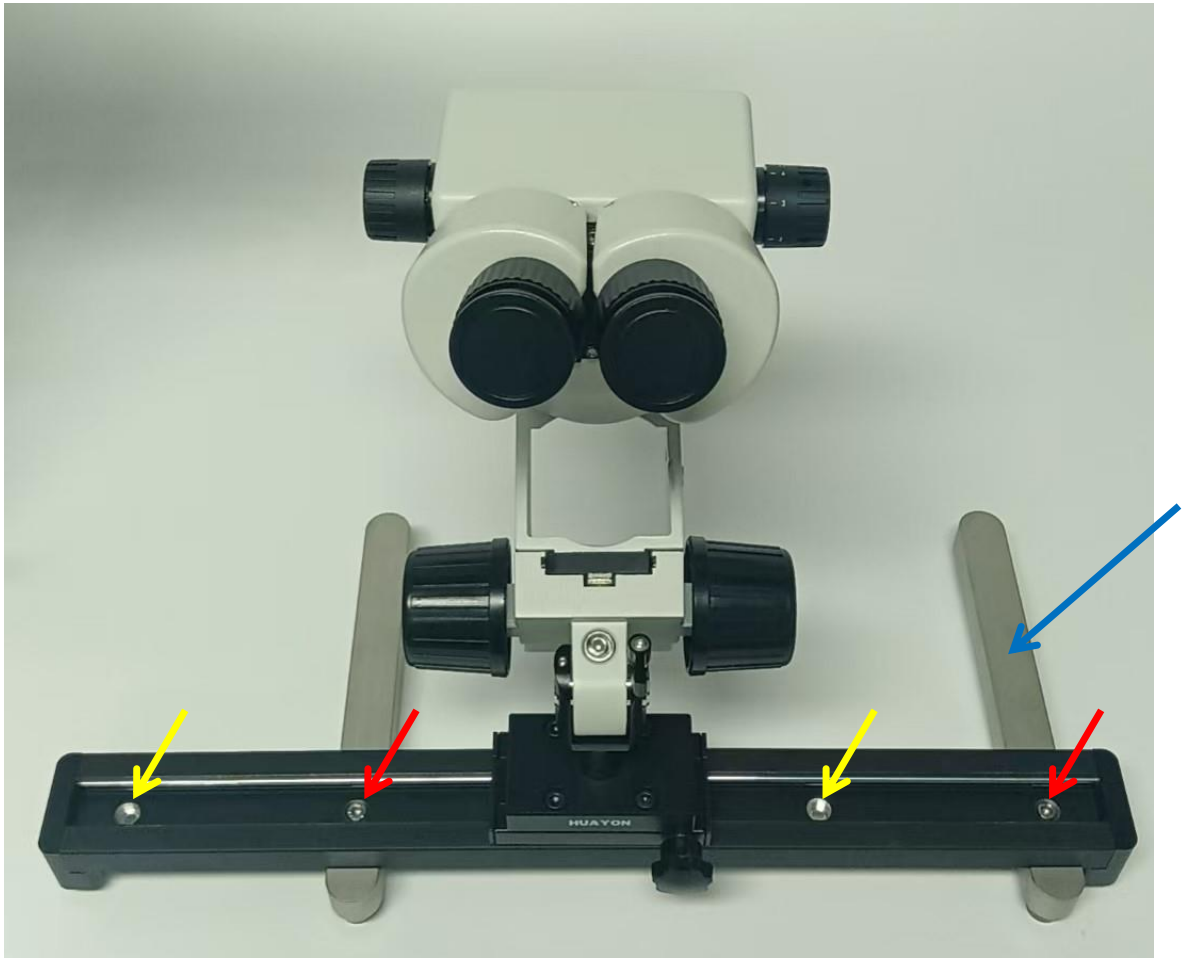
Eyepiece	Standard Configuration		Additional Objective Lens					
			0.5X		1.5X		2X	
	Working Distance 100mm		Working Distance 165mm		Working Distance 45mm		Working Distance 30mm	
	Magnification	Field of View	Magnification	Field of View	Magnification	Field of View	Magnification	Field of View
10X/20	7X	28.6	3.5X	57.1	10.5X	19	14X	14.3
	45X	4.4	22.5X	8.9	67.5X	3	90X	2.2
15X/15	10.5X	21.4	5.25X	42.8	15.75X	14.3	21X	10.7
	67.5X	3.3	33.75X	6.7	101.25X	2.2	135X	1.7
20X/10	14X	14.3	7X	28.6	21X	9.5	28X	7.1
	90X	2.2	45X	4.4	135X	1.5	180X	1.1

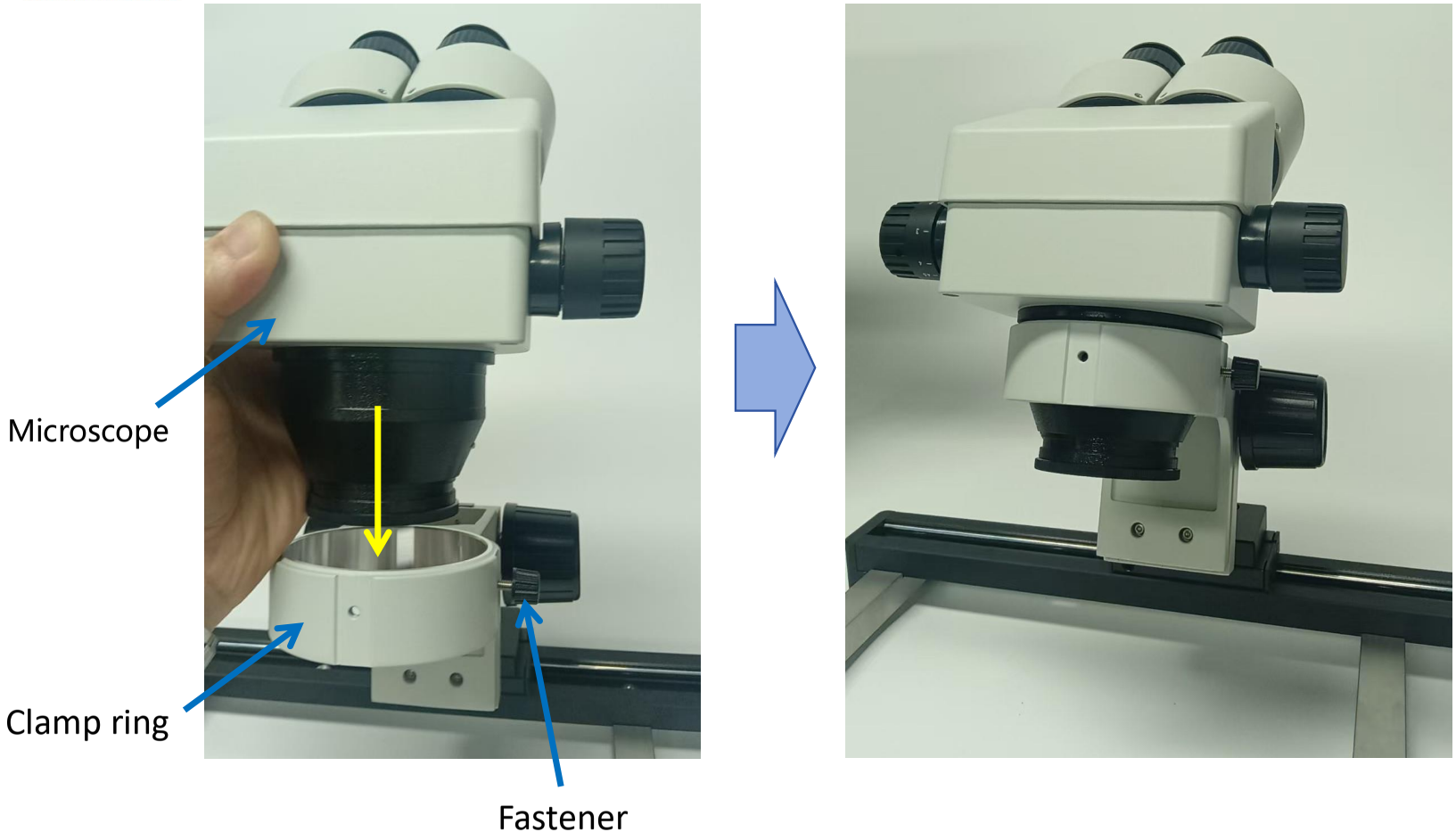
Application Example:

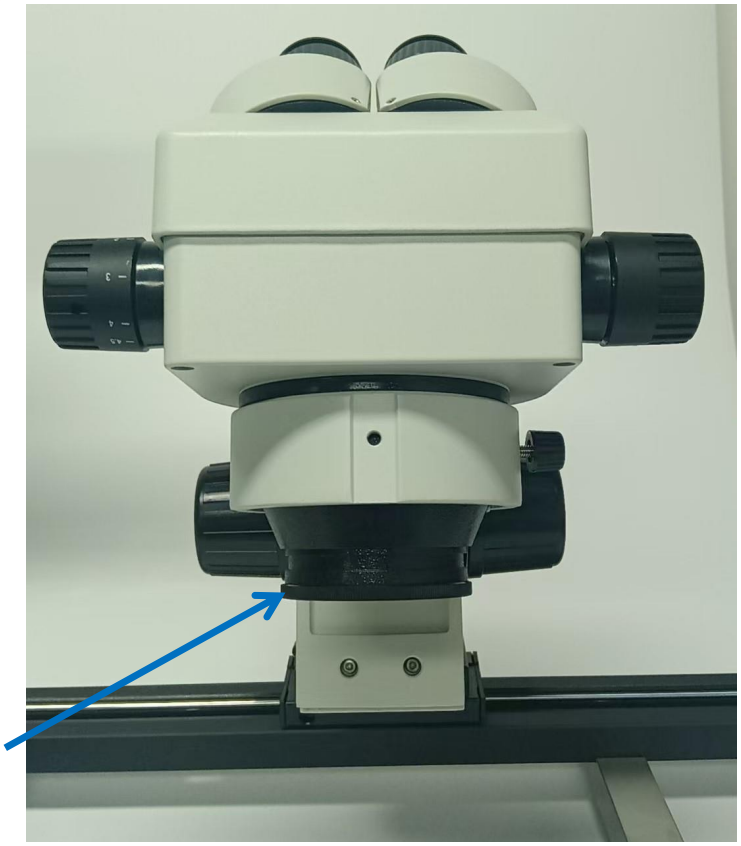




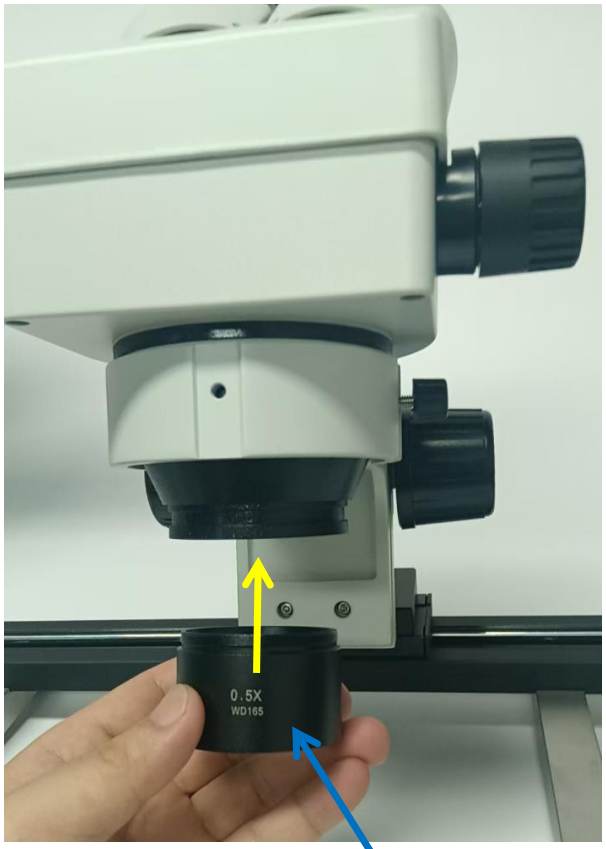

Diopter adjustment ring
Eyepiece
Microscope
Zoom handwheel
LED ring light
Focusing handwheel
Microscope base
Support rod
Slide rail


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Microscope
Clamp ring
Fastener



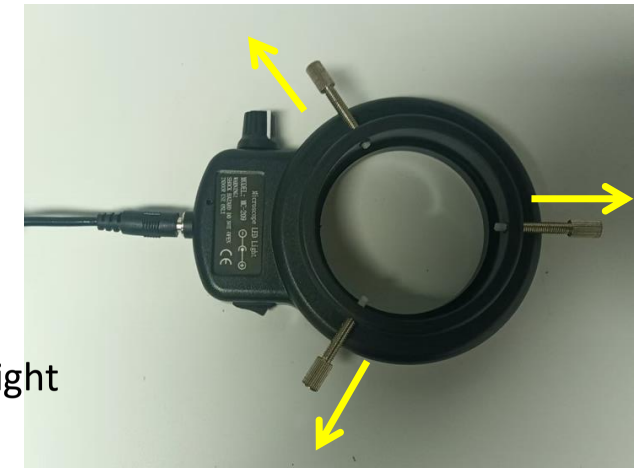
Objective lens
dust cover



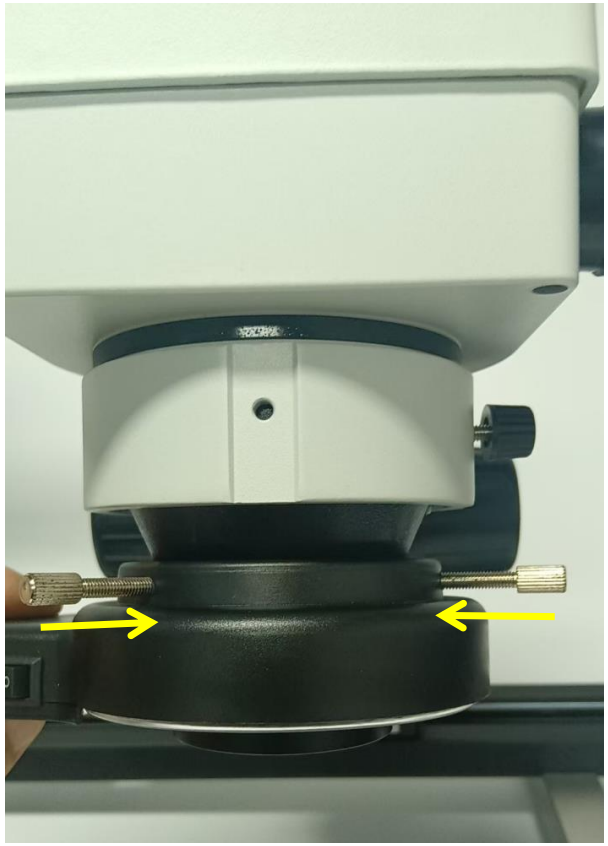
0.5x auxiliary lens

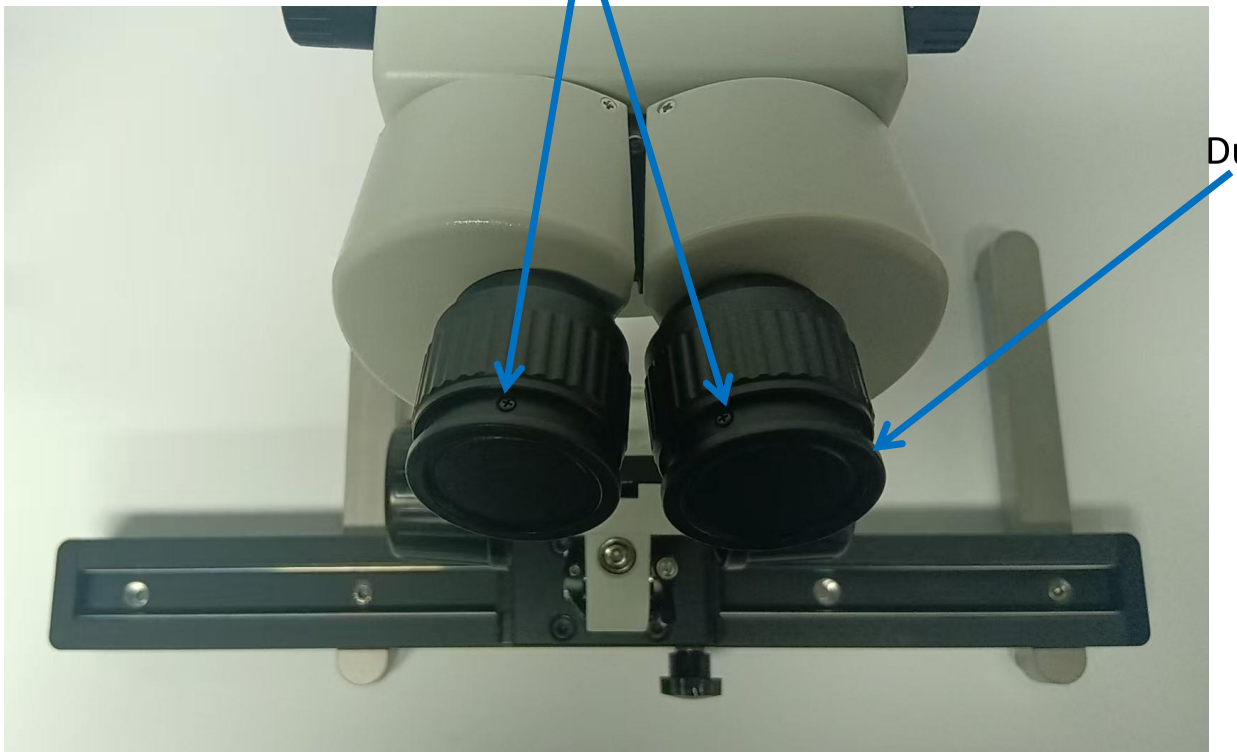
Ring light slot





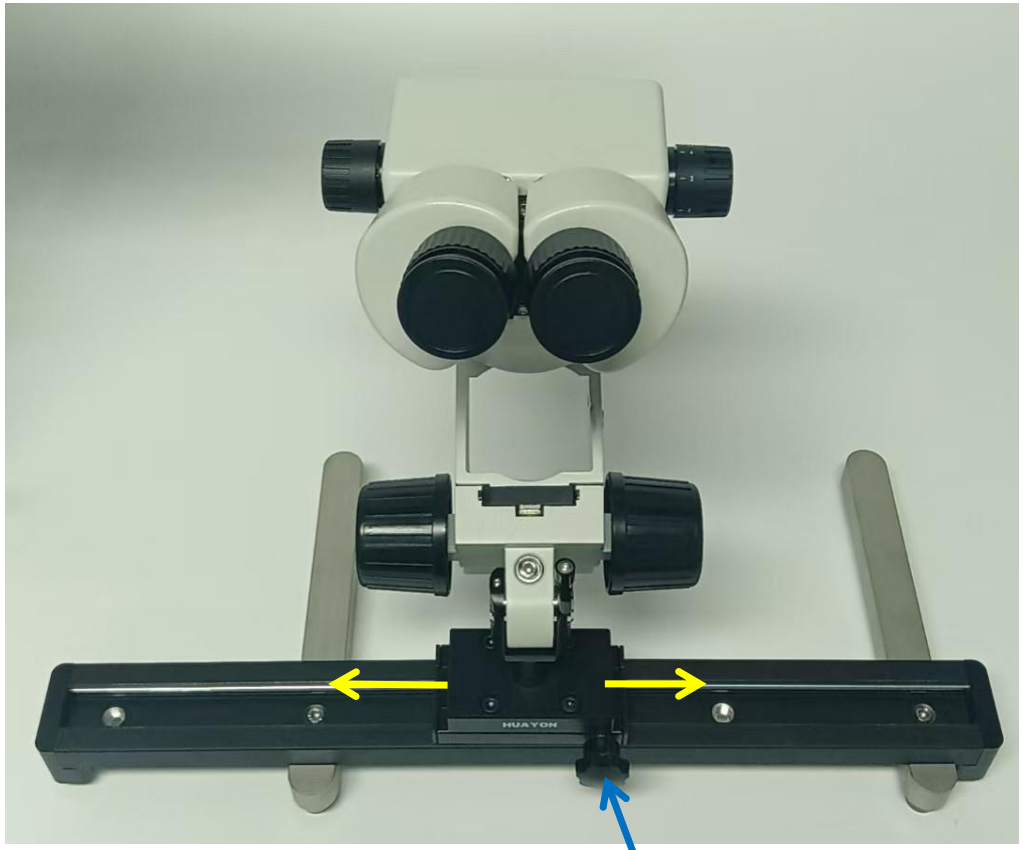
LED ring light




Screw
Dust cover

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Handle

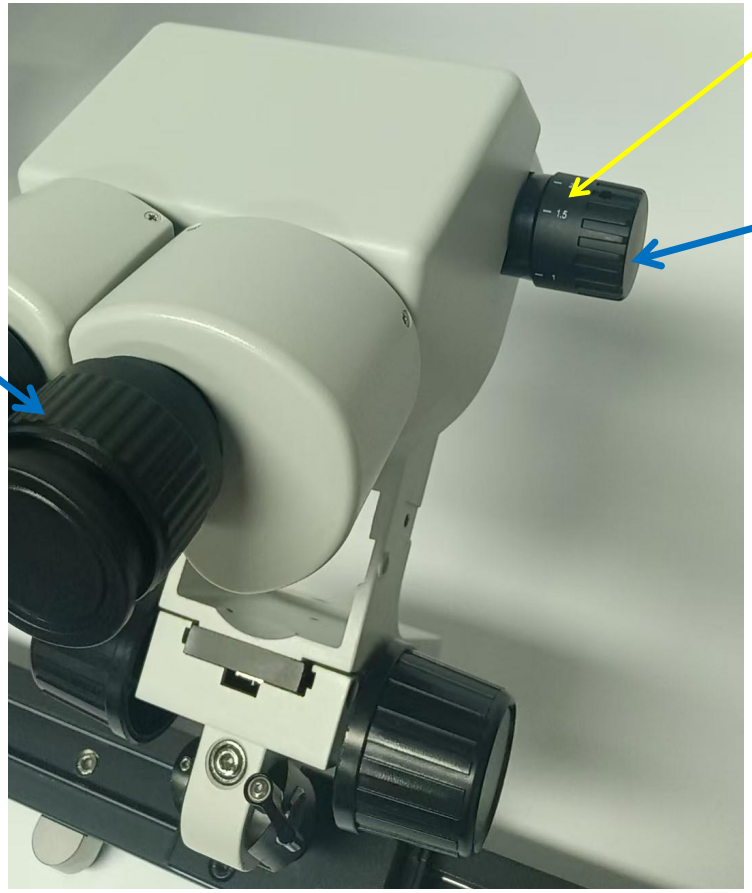

Handle

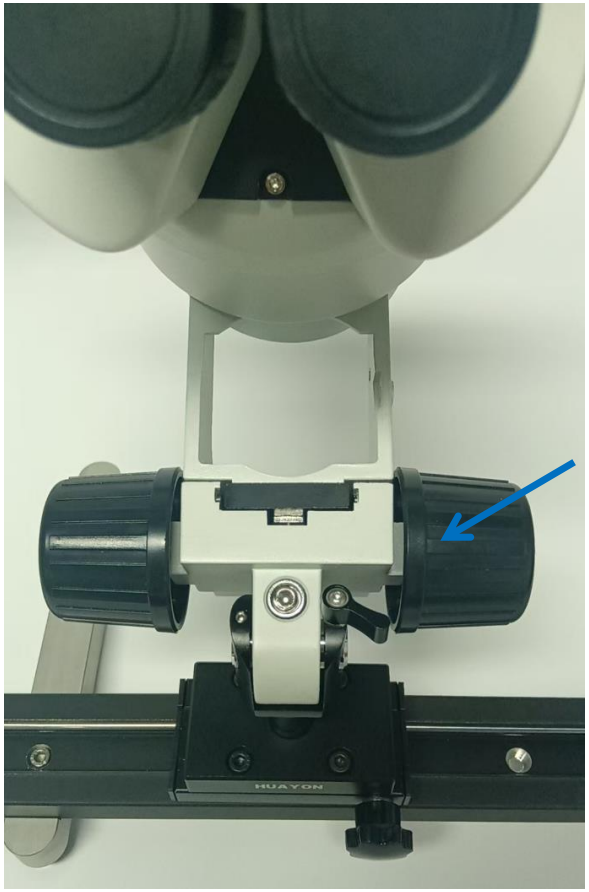


Magnification indicator

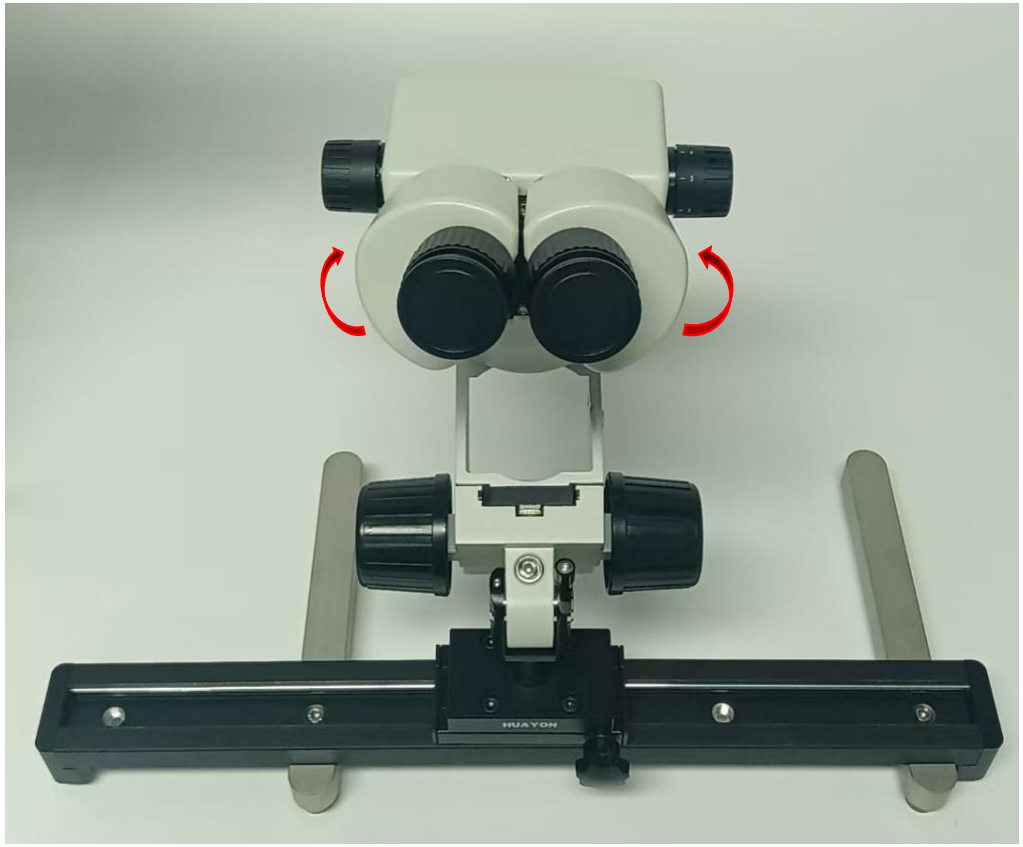
Zoom control knob

Diopter ring





Focus adjustment knob (Fine focus)


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